

METHOD OF RENAMING REGISTERS IN REGISTER FILE AND MICROPROCESSOR THEREOF

Abstract of the Disclosure

A microprocessor for processing instructions comprises multiple clusters for
5 receiving the instructions, each of the clusters having a plurality of functional units
for executing the instructions, multiple register sub-files each having multiple
registers for storing data for executing the instructions, wherein each of the
clusters is associated with corresponding one of the register sub-files so that an
instruction dispatched to a cluster is executed by accessing registers in a register
10 sub-file associated with the cluster to which the instruction is dispatched, a
register-renaming unit for renaming target registers in an instruction with registers
in a register sub-file associated with a cluster to which the instruction is
dispatched, and issue-queue units each of which is associated with a
corresponding one of the clusters, wherein an issue-queue unit holds instruction
15 renamed by the register-renaming unit until the renamed instruction is issued to be
executed in a cluster associated with the issue-queue unit.